

IN THE CLAIMS:

Claims 1 and 2 were previously withdrawn.

3. (currently amended) A system for vaccination and/or therapy, consisting of a composition or a kit comprising a) a vaccine ~~or medicament~~ and b) an adjuvant, wherein the adjuvant comprises a pine cone extract.

4. (currently amended) The system of claim 3, wherein the vaccine is selected from the group consisting of a nucleic acid vaccine, a peptide vaccine, a protein vaccine, a live virus vaccine, a killed virus vaccine, a whole cell vaccine, a tumor cell lysate vaccine, and a mixture thereof ~~medicament is a nucleic acid vaccine or medicament~~.

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(original) The system of claim 3, wherein the pine cone extract comprises a pine cone extract produced by a method comprising the steps of:

- a) heat extracting of defatted ground pine cone material with an aqueous solvent comprising potassium hydroxide;
- b) removing particulate matter with an average particle size greater than 0.2 μm and leaving an aqueous solution; and

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c) adjusting the pH of the resulting aqueous solution to between 6.0 and 8.0.

6. (currently amended) The system of claim 5-3, wherein the pine cone extract comprises a pine cone extract produced by a method comprising the steps of:

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- e) a) heat extracting of defatted ground pine cone material with an aqueous solvent comprising potassium hydroxide;
- e) b) removing particulate matter with an average particle size greater than 0.2 μm leaving a supernatant;
- e) c) adjusting the pH of the resulting aqueous solution to between 6.0 and 8.0,

characterized in that the method further comprises the steps of:

- e) d) filtrating the supernatant to obtain a retentate fraction;
- e) e) drawing off the retentate fraction and removing particles with an average molecular mass of less than 30 kDa; and

(f) suspending the retentate fraction in an aqueous solvent comprising potassium hydroxide at a pH between 6.0 and 8.0.

7. (currently amended) A method of vaccinating or treating a vertebrate, comprising the steps of:

a) administering to the vertebrate a vaccine ~~or medicament~~;
and

b) administering to the vertebrate a pine cone extract, wherein the administration of said extract is before, during, simultaneously with, or after, the administration of said vaccine.

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(currently amended) The method of claim 7, wherein the vaccine is selected from the group consisting of a nucleic acid vaccine, a peptide vaccine, a protein vaccine, a live virus vaccine, a killed virus vaccine, a whole cell vaccine, a tumor cell lysate vaccine, and a mixture thereof ~~medicament comprises a nucleic acid vaccine or medicament.~~

9. (currently amended) The method of claim 7, wherein the pine cone extract comprises a pine cone extract produced by a method comprising the steps of:

d) a) heat extracting of defatted ground pine cone material with an aqueous solvent comprising potassium hydroxide;

e) b) removing particulate matter with an average particle size greater than 0.2 μm leaving a supernatant; and

f) c) adjusting the pH of the resulting solution to between 6.0 and 8.0.

Amend
10. (currently amended) The method of claim 7, wherein the pine cone extract comprises a pine cone extract of claim 2-5.

11. (original) The method of claim 7, wherein the pine cone extract is administered orally, by intramuscular injection, by inhalation or by application on mucosal skin.

12. (original) The method of claim 7, wherein the vertebrate is vaccinated or treated against cancer and/or viral infection.

Claims 13-16 were previously withdrawn.

17. (new) An adjuvant for administration before, during, simultaneously with, or after, a vaccine, wherein said adjuvant comprises a pine cone extract.

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18. (new) The adjuvant of claim 17, wherein said vaccine is a nucleic acid vaccine.

19. (new) The adjuvant of claim 17, wherein the pine cone extract comprises a pine cone extract produced by a method comprising the steps of:

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- a) heat extracting of defatted ground pine cone material with an aqueous solvent comprising potassium hydroxide;
- b) removing particulate matter with an average particle size greater than 0.2 μm and leaving an aqueous solution; and
- c) adjusting the pH of the resulting aqueous solution to between 6.0 and 8.0.
